

# EXPLORATION



◀ **Sarum Peou, Newlands Senior Geologist, inspects drill core at a drill site close to the Newlands mine. Increased coal exploration activity during the year saw coal reserves increase 29% at NCA and 23% at Oaky Creek.**

Exploration increased considerably in 2002 as the company sought successfully to increase reserves and resources around existing mining operations and at the same time conduct regional generative and reconnaissance programmes.

At Mount Isa, copper Reserves were extended to 12 years and Resources

## EXPLORATION EXPENDITURE

Year ended 30 June	2002 (\$M)	2001 (\$M)
Exploration and resource definition	46.4	28.4

increased (see page 23). At Ernest Henry copper-gold mineralisation was intersected below the limit of previous drilling. Coal Reserves and Resources were increased around the NCA and Oaky Creek mines and at the Rolleston project, supporting planned production increases over long mine lives (see page 25).

In other near mine extension activities, deep exploration drilling commenced on the Mount Isa lease and targets near the Ernest Henry and the

old Tick Hill mine were tested. In coal, the 3D seismic programme continued to assist reserve estimation and mine planning at Oaky Creek and Newlands.

The focus on copper was maintained in Australia and Central and South America, and on coal in Australia.

Copper and gold were targeted in the Lachlan Fold Belt (New South Wales), the Curnamona and Gawler Cratons (South Australia) and eastern Queensland.

In Argentina, an earlier emphasis on grassroots and follow-up reconnaissance work has led to identification of regions prospective for porphyry copper-gold systems. In central Argentina, MIM has a dominant land position in a region with potential for having Olympic Dam/Ernest Henry style targets.

In Chile, tenements with potential for hidden porphyry copper-gold systems will be explored in the coming year using the MIM proprietary MIMDAS (electrical geophysical) system.

In Mexico, copper and gold exploration included an interesting intersection at the Cobre Grande prospect (Oaxaca State) which will be followed up in the coming year.

For more information on Exploration visit: [www.mim.com.au/exploration.html](http://www.mim.com.au/exploration.html)

# PROCESS TECHNOLOGIES

**Gus Govan, ▶ Isa Process Manufacturing Superintendent, inspects Isa Process cathode mother plates manufactured at MIM's Townsville copper refinery for export to the new Isa Process refinery at Jiangxi Copper Company (JCC) in China. MIM's ISASMELT technology is now being applied in China, at the Yunnan Copper Corporation (YCC) smelter in Kunming.**



MIM's strategy of developing technology for use in its operations and for sale to the broader market continued to produce benefits in 2002. These included profitability, and strengthening of the company's technical leadership and competitiveness.

Successful projects included the design and commissioning of a new copper ISASMELT plant in China. This project followed on from the successful start up of a plant in Germany. MIM's proprietary Albion Process for atmospheric leaching to produce metal

directly from concentrate has entered pilot production, producing zinc metal from McArthur River mine concentrate. This technology has potential to revolutionise MIM's lead-zinc business. Work continued on further improvements to MIM's IsaMill grinding technology for use within MIM and through collaborative development agreements with other companies. Sales of the technology for ultra fine grinding of minerals other than MIM's core products have occurred in South Africa.

The unique Jameson Cell flotation technology continued to dominate the Australian fine coal flotation market. An improvement to the technology has achieved significant improvement in coal recovery. This innovation has been applied to MIM's coal operations, and is an example of how the company benefits from its technology strategy.

Furthermore, a large Jameson Cell is being supplied to a solvent extraction plant, demonstrating the versatility of the technology, and the success of the marketing strategy.

Meanwhile, two new MIM developed technologies will advance to pilot metal production in the coming year. IsaConverting is an efficient and environmentally friendly technology used in the copper smelting process. A pilot plant is being designed for development and demonstration of the process. Combined with the company's other copper smelting and refining technologies, it provides a package of world leading copper technologies.

MIM's Isa Process, the leading copper refining technology, continued to be successfully marketed, including a sale to Japan.

For more information on Process Technologies visit: [www.mim.com.au/technology.html](http://www.mim.com.au/technology.html)